

Exhibit F

Query= SEQ ID NO:1
(8262 letters)

Sequences producing significant alignments:	Score (bits)	E Value
AP002768.3.1.186084	<u>3205</u>	0.0
AP002957.2.1.87834	<u>541</u>	e-150
AP002515.3.1.166063	<u>509</u>	e-141

>AP002768.3.1.186084
Length = 186084

Score = 3205 bits (1617), Expect = 0.0
Identities = 1617/1617 (100%)
Strand = Plus / Minus

Query: 5744 agtccatggtgctgctactacacagccagaggcagtatatctttgagttcgacaagaatg 5803
|||||
Sbjct: 40097 agtccatggtgctgctactacacagccagaggcagtatatctttgagttcgacaagaatg 40038

Query: 5804 accgcctctcttctgtgacgatgccccacgtggcgcggcagacactagagaccatccgct 5863
|||||
Sbjct: 40037 accgcctctcttctgtgacgatgccccacgtggcgcggcagacactagagaccatccgct 39978

Query: 5864 cagtgggctactacagaaacatctatcagccccctgagggcaatgcctcagtcatacagg 5923
|||||
Sbjct: 39977 cagtgggctactacagaaacatctatcagccccctgagggcaatgcctcagtcatacagg 39918

Query: 5924 acttcactgaggatgggcacctccttcacaccttctacctgggcactggccgcaggggtga 5983
|||||
Sbjct: 39917 acttcactgaggatgggcacctccttcacaccttctacctgggcactggccgcaggggtga 39858

Query: 5984 tatacaagtatggcaaactgtcaaagctggcagagacgctctatgacaccaccaaggtca 6043
|||||
Sbjct: 39857 tatacaagtatggcaaactgtcaaagctggcagagacgctctatgacaccaccaaggtca 39798

Query: 6044 gtttcacctatgacgagacggcagggcatgctgaagaccatcaacctacagaatgaggggct 6103
|||||
Sbjct: 39797 gtttcacctatgacgagacggcagggcatgctgaagaccatcaacctacagaatgaggggct 39738

Query: 6104 tcacctgcaccatccgctaccgtcagattggggccctgattgaccgacagatcttccgct 6163
|||||
Sbjct: 39737 tcacctgcaccatccgctaccgtcagattggggccctgattgaccgacagatcttccgct 39678

Query: 6164 tcaactgaggaaggcatgggtcaacgcccgttttgactacaactatgacaacagcttccggg 6223
|||||
Sbjct: 39677 tcaactgaggaaggcatgggtcaacgcccgttttgactacaactatgacaacagcttccggg 39618

Query: 6224 tgaccagcatgcaggctgtgatcaacgagacccccactgcccattgatctctatcgctatg 6283
|||||
Sbjct: 39617 tgaccagcatgcaggctgtgatcaacgagacccccactgcccattgatctctatcgctatg 39558

Query: 6284 atgatgtgtcaggcaagacagagcagtttgggaagtttggtgtcatttactatgacatta 6343
|||||
Sbjct: 39557 atgatgtgtcaggcaagacagagcagtttgggaagtttggtgtcatttactatgacatta 39498

Query: 6344 accagatcatcaccacagctgtcatgaccacaccaagcattttgatgcatatggcagga 6403
|||||
Sbjct: 39497 accagatcatcaccacagctgtcatgaccacaccaagcattttgatgcatatggcagga 39438

Query: 6404 tgaaggaagtgcagtatgagatcttccgctcgctcatgtactggatgaccgtccagtatg 6463
|||||
Sbjct: 39437 tgaaggaagtgcagtatgagatcttccgctcgctcatgtactggatgaccgtccagtatg 39378

Query: 6464 ataacatggggcgagtagtgaagaaggagctgaaggtaggaccctacgccaataccactc 6523
|||||
Sbjct: 39377 ataacatggggcgagtagtgaagaaggagctgaaggtaggaccctacgccaataccactc 39318

Query: 6524 gctactcctatgagtatgatgctgacggccagctgcagacagctctccatcaatgacaagc 6583
|||||
Sbjct: 39317 gctactcctatgagtatgatgctgacggccagctgcagacagctctccatcaatgacaagc 39258

Query: 6584 cactctggcgctacagctacgacctcaatgggaacctgcacttactgagccctgggaaca 6643
|||||
Sbjct: 39257 cactctggcgctacagctacgacctcaatgggaacctgcacttactgagccctgggaaca 39198

Query: 6644 gtgcacggctcacaccactacgggtatgacatccgcgaccgcatcactcggtgggtgacg 6703
|||||
Sbjct: 39197 gtgcacggctcacaccactacgggtatgacatccgcgaccgcatcactcggtgggtgacg 39138

Query: 6704 tgcaatacaagatggatgaggatggcttcctgaggcagcggggcggtgatatctttgagt 6763
|||||
Sbjct: 39137 tgcaatacaagatggatgaggatggcttcctgaggcagcggggcggtgatatctttgagt 39078

Query: 6764 acaactcagctggcctgctcatcaaggcctacaaccgggctggcagctggagtgtcaggt 6823
|||||
Sbjct: 39077 acaactcagctggcctgctcatcaaggcctacaaccgggctggcagctggagtgtcaggt 39018

Query: 6824 accgctacgatggcctggggcggcgctgtccagcaagagcagccacagccaccacctgc 6883
|||||
Sbjct: 39017 accgctacgatggcctggggcggcgctgtccagcaagagcagccacagccaccacctgc 38958

Query: 6884 agttcttctatgcagacctgaccaacccaccaaggtcacccacctgtacaaccactcca 6943
|||||
Sbjct: 38957 agttcttctatgcagacctgaccaacccaccaaggtcacccacctgtacaaccactcca 38898

Query: 6944 gctctgagatcacctccctctactacgacttgcaaggacacctctttgccatggagctga 7003
|||||
Sbjct: 38897 gctctgagatcacctccctctactacgacttgcaaggacacctctttgccatggagctga 38838

Query: 7004 gcagtggtgatgagttttacatagcttgtagacaacatcgggacccctcttgctgtcttta 7063
|||||
Sbjct: 38837 gcagtggtgatgagttttacatagcttgtagacaacatcgggacccctcttgctgtcttta 38778

Query: 7064 gtggaacaggtttgatgatcaagcaaactctgtacacagcctatggggagatctacatgg 7123
|||||
Sbjct: 38777 gtggaacaggtttgatgatcaagcaaactctgtacacagcctatggggagatctacatgg 38718

Query: 7124 ataccaaccccaactttcagatcatcataggctaccatgggtggcctctatgatccactca 7183
|||||
Sbjct: 38717 ataccaaccccaactttcagatcatcataggctaccatgggtggcctctatgatccactca 38658

Query: 7184 ccaagcttggtccacatggggccggcgagattatgatgtgctggccggacgctggactagcc 7243
|||||
Sbjct: 38657 ccaagcttggtccacatggggccggcgagattatgatgtgctggccggacgctggactagcc 38598

Query: 7244 cagaccacgagctgtggaagcaccttagtagcagcaacgtcatgccttttaattctctata 7303
|||||
Sbjct: 38597 cagaccacgagctgtggaagcaccttagtagcagcaacgtcatgccttttaattctctata 38538

Query: 7304 tgttcaaaaacaacaaccccatcagcaactcccaggacatcaagtgcttcatgacag 7360
|||||
Sbjct: 38537 tgttcaaaaacaacaaccccatcagcaactcccaggacatcaagtgcttcatgacag 38481

Score = 1752 bits (884), Expect = 0.0
Identities = 884/884 (100%)
Strand = Plus / Minus

Query: 4159 caggttcacctggagtggtggccacagacttagccatcaacccaatggacaactcactttat 4218
|||||
Sbjct: 71950 caggttcacctggagtggtggccacagacttagccatcaacccaatggacaactcactttat 71891

Query: 4219 gtcctcgacaacaatgtgggtcctgcaaactctctgaaaaccaccagggtgcgcattgtcgcc 4278
|||||
Sbjct: 71890 gtcctcgacaacaatgtgggtcctgcaaactctctgaaaaccaccagggtgcgcattgtcgcc 71831

Query: 4279 gggaggcccatgcactgccaggccctggcattgaccacttcctgctaagcaaggtggcc 4338
|||||
Sbjct: 71830 gggaggcccatgcactgccaggccctggcattgaccacttcctgctaagcaaggtggcc 71771

Query: 4339 atccacgcaaccctggagtcagccaccgctttggctgtttcacacaatggggtcctgtat 4398
|||||
Sbjct: 71770 atccacgcaaccctggagtcagccaccgctttggctgtttcacacaatggggtcctgtat 71711

Query: 4399 attgctgagactgatgagaaaaagatcaaccgcatcaggcaggtcaccactagtggagag 4458
|||||
Sbjct: 71710 attgctgagactgatgagaaaaagatcaaccgcatcaggcaggtcaccactagtggagag 71651

Query: 4459 atctcactcgttgctggggcccccagtggtgtgactgtaaaaatgatgccaaactgtgat 4518
|||||
Sbjct: 71650 atctcactcgttgctggggcccccagtggtgtgactgtaaaaatgatgccaaactgtgat 71591

Query: 4519 tgtttttctggagacgatgggttatgccaaaggatgcaaagttaaatacccatcttccttg 4578
|||||
Sbjct: 71590 tgtttttctggagacgatgggttatgccaaaggatgcaaagttaaatacccatcttccttg 71531

Query: 4579 gctgtgtgtgctgatggggagctctacgtggccgaccttgggaacatccgaattcggttt 4638
|||||
Sbjct: 71530 gctgtgtgtgctgatggggagctctacgtggccgaccttgggaacatccgaattcggttt 71471

Query: 4639 atccggaagaacaagcctttcctcaacacccagaacatgtatgagctgtcttcaccaatt 4698
|||||
Sbjct: 71470 atccggaagaacaagcctttcctcaacacccagaacatgtatgagctgtcttcaccaatt 71411

Query: 4699 gaccaggagctctatctgtttgataaccacggcaagcacctgtacacccaaagcctgccc 4758
|||||
Sbjct: 71410 gaccaggagctctatctgtttgataaccacggcaagcacctgtacacccaaagcctgccc 71351

Query: 4759 acaggagactacctgtacaacttcacctacactggggacggcgacatcacactcatcaca 4818
|||||
Sbjct: 71350 acaggagactacctgtacaacttcacctacactggggacggcgacatcacactcatcaca 71291

Query: 4819 gacaacaatggcaacatggtaaagtccgccgagactctactgggatgcccctctggctg 4878
|||||
Sbjct: 71290 gacaacaatggcaacatggtaaagtccgccgagactctactgggatgcccctctggctg 71231

Query: 4879 gtggtcccagatggccagggtgtactgggtgaccatgggcaccaacagtgcactcaagagt 4938
|||||
Sbjct: 71230 gtggtcccagatggccagggtgtactgggtgaccatgggcaccaacagtgcactcaagagt 71171

Query: 4939 gtgaccacacaaggacacgagttggccatgatgacataccatggcaattccggccttctg 4998
|||||
Sbjct: 71170 gtgaccacacaaggacacgagttggccatgatgacataccatggcaattccggccttctg 71111

Query: 4999 gcaacccaaaagcaatgaaaacggatggacaacattttatgagta 5042
|||||
Sbjct: 71110 gcaacccaaaagcaatgaaaacggatggacaacattttatgagta 71067

Score = 1509 bits (761), Expect = 0.0
Identities = 761/761 (100%)
Strand = Plus / Minus

Query: 7502 agtctatcctcggggtacagtgtgaagtacagaagcagctcaaggcctttgtcaccttag 7561
|||||
Sbjct: 28362 agtctatcctcggggtacagtgtgaagtacagaagcagctcaaggcctttgtcaccttag 28303

Query: 7562 aacggtttgaccagctctatggctccacaatcaccagctgccagcaggctccaaagacca 7621
|||||
Sbjct: 28302 aacggtttgaccagctctatggctccacaatcaccagctgccagcaggctccaaagacca 28243

Query: 7622 agaagtttgcatccagcgggtcagtccttggcaagggggtcaagtttgccttgaaggatg 7681
|||||
Sbjct: 28242 agaagtttgcatccagcgggtcagtccttggcaagggggtcaagtttgccttgaaggatg 28183

Query: 7682 gccgagtgaccacagacatcatcagtggtggccaatgaggatgggcgaagggttgctgcc 7741
|||||
Sbjct: 28182 gccgagtgaccacagacatcatcagtggtggccaatgaggatgggcgaagggttgctgcc 28123

Query: 7742 tcttgaaccatgccactacctagagaacctgcacttcaccattgatggggtggataccc 7801
|||||
Sbjct: 28122 tcttgaaccatgccactacctagagaacctgcacttcaccattgatggggtggataccc 28063

Query: 7802 attactttgtgaaaccaggaccttcagaagggtgacctggccatcctgggcctcagtgggg 7861
|||||
Sbjct: 28062 attactttgtgaaaccaggaccttcagaagggtgacctggccatcctgggcctcagtgggg 28003

Query: 7862 ggcggcgaaccctggagaatggggtcaacgtcactgtgtcccagatcaacacagtactta 7921
|||||
Sbjct: 28002 ggcggcgaaccctggagaatggggtcaacgtcactgtgtcccagatcaacacagtactta 27943

Query: 7922 atggcaggactagacgctacacagacatccagctccagtacggggcactgtgcttgaaca 7981
|||||
Sbjct: 27942 atggcaggactagacgctacacagacatccagctccagtacggggcactgtgcttgaaca 27883

Query: 7982 cacgctacgggacaacggttgatgaggagaaggcacgggtcctggagctggccccggcaga 8041
|||||
Sbjct: 27882 cacgctacgggacaacggttgatgaggagaaggcacgggtcctggagctggccccggcaga 27823

Query: 8042 gagccgtgcgccaagcgtgggccccgcgagcagcagagactgcgggaaggggaggaaggcc 8101
|||||
Sbjct: 27822 gagccgtgcgccaagcgtgggccccgcgagcagcagagactgcgggaaggggaggaaggcc 27763

Query: 8102 tgcgggcctggacagagggggagaagcagcaggtgctgagcacagggcgggtgcaaggct 8161
|||||
Sbjct: 27762 tgcgggcctggacagagggggagaagcagcaggtgctgagcacagggcgggtgcaaggct 27703

Query: 8162 acgacggctttttcgtgatctctgtcgagcagtaccagaactgtcagacagcgccaaca 8221
|||||
Sbjct: 27702 acgacggctttttcgtgatctctgtcgagcagtaccagaactgtcagacagcgccaaca 27643

Query: 8222 acatccacttcatgagacagagcgagatgggcccggaggtga 8262
|||||
Sbjct: 27642 acatccacttcatgagacagagcgagatgggcccggaggtga 27602

Score = 591 bits (298), Expect = e-165
Identities = 298/298 (100%)
Strand = Plus / Minus

Query: 5448 gggttcacaaccgaaatctcctatctctggactttgatcgcgtaacacgcacagagaagat 5507
|||||
Sbjct: 41874 gggttcacaaccgaaatctcctatctctggactttgatcgcgtaacacgcacagagaagat 41815

Query: 5508 ctatgatgaccaccgcaagttcacccttcggattctgtacgaccaggcggggcgggccag 5567
|||||
Sbjct: 41814 ctatgatgaccaccgcaagttcacccttcggattctgtacgaccaggcggggcgggccag 41755

Query: 5568 cctctgggtcaccacagcagcaggctgaatggtgtcaacgtgacatactcccctgggggtta 5627
|||||
Sbjct: 41754 cctctgggtcaccacagcagcaggctgaatggtgtcaacgtgacatactcccctgggggtta 41695

Query: 5628 cattgctggcatccagaggggcatcatgtctgaaagaatggaatacgaccaggcggggccg 5687
|||||
Sbjct: 41694 cattgctggcatccagaggggcatcatgtctgaaagaatggaatacgaccaggcggggccg 41635

Query: 5688 catcacatccaggatcttcgctgatgggaagacatggagctacacatacttagagaag 5745
|||||
Sbjct: 41634 catcacatccaggatcttcgctgatgggaagacatggagctacacatacttagagaag 41577

Score = 535 bits (270), Expect = e-148
Identities = 270/270 (100%)
Strand = Plus / Minus

Query: 3110 aggctttgcaggaggaaatctctatctctggctgcaagatgaggctgagctacctgagca 3169
|||||

Sbjct: 99189 aggctttgcaggaggaaatctctatctctggctgcaagatgaggctgagctacctgagca 99130

Query: 3170 gccggacccctggctacaaatctgtcctgaggatcagcctcaccacccgaccatcccct 3229
|||||

Sbjct: 99129 gccggacccctggctacaaatctgtcctgaggatcagcctcaccacccgaccatcccct 99070

Query: 3230 tcaacctcatgaagggtgcacctcatggtagcggtggagggccgcctcttcaggaagtgg 3289
|||||

Sbjct: 99069 tcaacctcatgaagggtgcacctcatggtagcggtggagggccgcctcttcaggaagtgg 99010

Query: 3290 tcgctgcagccccagacctgtcctattattttcatttgggacaagacagacgtctacaacc 3349
|||||

Sbjct: 99009 tcgctgcagccccagacctgtcctattattttcatttgggacaagacagacgtctacaacc 98950

Query: 3350 agaaggtgtttgggctttcagaagcctttg 3379
|||||

Sbjct: 98949 agaaggtgtttgggctttcagaagcctttg 98920

Score = 527 bits (266), Expect = e-146
Identities = 266/266 (100%)
Strand = Plus / Minus

Query: 2847 cagctttgacttggtgacaaatggcggcacatctccatcatcctgcggttcgagcgggcacc 2906
|||||

Sbjct: 102124 cagctttgacttggtgacaaatggcggcacatctccatcatcctgcggttcgagcgggcacc 102065

Query: 2907 tttcatcacacaggagcacaccctgtggctgccatgggatcgcttctttgtcatggaaac 2966
|||||

Sbjct: 102064 tttcatcacacaggagcacaccctgtggctgccatgggatcgcttctttgtcatggaaac 102005

Query: 2967 catcatcatgagacatgaggagaatgagattcccagctgtgacctgagcaattttgcccg 3026
|||||

Sbjct: 102004 catcatcatgagacatgaggagaatgagattcccagctgtgacctgagcaattttgcccg 101945

Query: 3027 ccccaacccagtcgtctctccatccccactgacgtccttcgccagctcctgtgcagagaa 3086
|||||

Sbjct: 101944 ccccaacccagtcgtctctccatccccactgacgtccttcgccagctcctgtgcagagaa 101885

Query: 3087 agggcccccattgtgccggaattcagg 3112
|||||
Sbjct: 101884 agggcccccattgtgccggaattcagg 101859

Score = 498 bits (251), Expect = e-137
Identities = 251/251 (100%)
Strand = Plus / Minus

Query: 3523 ggcacacctgcacaaaggggaatggggagaaccagtttgtgtctcagcagcctcctgtcatt 3582
|||||
Sbjct: 92462 ggcacacctgcacaaaggggaatggggagaaccagtttgtgtctcagcagcctcctgtcatt 92403

Query: 3583 gggagcatcatgggcaatgggcgccggagaagcatctcctgccccagctgcaacggcctt 3642
|||||
Sbjct: 92402 gggagcatcatgggcaatgggcgccggagaagcatctcctgccccagctgcaacggcctt 92343

Query: 3643 gctgacggcaacaagctcctggccccagtgccctcacctgtggctctgacgggagcctc 3702
|||||
Sbjct: 92342 gctgacggcaacaagctcctggccccagtgccctcacctgtggctctgacgggagcctc 92283

Query: 3703 tatgtgggtgatttcaactacattagaaggatcttccccctctggaaatgtcaccaacatc 3762
|||||
Sbjct: 92282 tatgtgggtgatttcaactacattagaaggatcttccccctctggaaatgtcaccaacatc 92223

Query: 3763 ctagagctgag 3773
|||||
Sbjct: 92222 ctagagctgag 92212

Score = 476 bits (240), Expect = e-130
Identities = 244/245 (99%), Gaps = 1/245 (0%)
Strand = Plus / Minus

Query: 5206 ctgcaagaccaagtccggaacagctactacatcggggccgatggctccttgcggtgctg 5265
|||||
Sbjct: 45937 ctgc-agaccaagtccggaacagctactacatcggggccgatggctccttgcggtgctg 45879

Query: 5266 ctggccaacggcatggaggtggcgctgcagactgagccccacttgctggctggcaccgtc 5325
|||||
Sbjct: 45878 ctggccaacggcatggaggtggcgctgcagactgagccccacttgctggctggcaccgtc 45819

Query: 5326 aacccccaccgtgggcaagaggaatgtcacgctgcccacgacaacggcctcaacctggtg 5385
|||||
Sbjct: 45818 aacccccaccgtgggcaagaggaatgtcacgctgcccacgacaacggcctcaacctggtg 45759

Query: 5386 gagtggcgccagcgcaaagagcaggctcggggccagggtcactgtctttgggcgccggctg 5445
|||||
Sbjct: 45758 gagtggcgccagcgcaaagagcaggctcggggccagggtcactgtctttgggcgccggctg 45699

Query: 5446 cgggt 5450
|||||
Sbjct: 45698 cgggt 45694

Score = 468 bits (236), Expect = e-128
Identities = 236/236 (100%)
Strand = Plus / Minus

Query: 3772 agtcacagtccagcacacaaaatactacctggccacagaccccatgagtggggccgtcttc 3831
|||||
Sbjct: 82260 agtcacagtccagcacacaaaatactacctggccacagaccccatgagtggggccgtcttc 82201

Query: 3832 ctttctgacagcaacagccggcggggtctttaaaatcaagtccactgtggtggtgaaggac 3891
|||||
Sbjct: 82200 ctttctgacagcaacagccggcggggtctttaaaatcaagtccactgtggtggtgaaggac 82141

Query: 3892 cttgtcaagaactctgaggtggttgcggggacaggtgaccagtgcctcccctttgatgac 3951
|||||
Sbjct: 82140 cttgtcaagaactctgaggtggttgcggggacaggtgaccagtgcctcccctttgatgac 82081

Query: 3952 actcgctgcggggatggtgggaaggccacagaagccacactcaccaatcccagggg 4007
|||||
Sbjct: 82080 actcgctgcggggatggtgggaaggccacagaagccacactcaccaatcccagggg 82025

Score = 436 bits (220), Expect = e-118
Identities = 220/220 (100%)
Strand = Plus / Minus

Query: 2511 agatggcctggtggactgcatggaccctgactgctgcctccagcccctgtgccatatcaa 2570
|||||
Sbjct: 126567 agatggcctggtggactgcatggaccctgactgctgcctccagcccctgtgccatatcaa 126508

Query: 2571 cccgctgtgccttggctcccctaaccctctggacatcatccaggagacacaggtccctgt 2630
|||||
Sbjct: 126507 cccgctgtgccttggctcccctaaccctctggacatcatccaggagacacaggtccctgt 126448

Query: 2631 gtcacagcagaacctacactccttctatgaccgcatcaagttcctcggtgggcagggacag 2690
|||||
Sbjct: 126447 gtcacagcagaacctacactccttctatgaccgcatcaagttcctcggtgggcagggacag 126388

Query: 2691 cacgcacataatccccgggggagaacccctttgatggaggg 2730
|||||
Sbjct: 126387 cacgcacataatccccgggggagaacccctttgatggaggg 126348

Score = 402 bits (203), Expect = e-108
Identities = 203/203 (100%)
Strand = Plus / Minus

Query: 1977 agtggactgcatggacccccacatgttcaggccggggtgtctgcgtgagaggcgaatgcca 2036
|||||
Sbjct: 175038 agtggactgcatggacccccacatgttcaggccggggtgtctgcgtgagaggcgaatgcca 174979

Query: 2037 ctgctctgtgggatggggaggcaccaactgagagacccccaggggccacatgcttagacca 2096
|||||
Sbjct: 174978 ctgctctgtgggatggggaggcaccaactgagagacccccaggggccacatgcttagacca 174919

Query: 2097 gtgttcaggccacggaaccttctcccggacaccgggctttgcagctgtgacccaagctg 2156
|||||
Sbjct: 174918 gtgttcaggccacggaaccttctcccggacaccgggctttgcagctgtgacccaagctg 174859

Query: 2157 gactggacacgactgttctatcg 2179
|||||
Sbjct: 174858 gactggacacgactgttctatcg 174836

Score = 391 bits (197), Expect = e-105
Identities = 197/197 (100%)
Strand = Plus / Minus

Query: 1782 agcctcctgccccgtgctctgtagcggaaatggccaatacatgaaaggcagatgcttgtg 1841
|||||
Sbjct: 181862 agcctcctgccccgtgctctgtagcggaaatggccaatacatgaaaggcagatgcttgtg 181803

Query: 1842 ccacagtggctggaaaggcgctgagtgcgatgtgccacccaaccagtgtatcgatgtggc 1901
|||||
Sbjct: 181802 ccacagtggctggaaaggcgctgagtgcgatgtgccacccaaccagtgtatcgatgtggc 181743

Query: 1902 ctgcagcaaccatggcacctgcatcacgggcacctgcatctgcaaccctggctacaaggg 1961
|||||
Sbjct: 181742 ctgcagcaaccatggcacctgcatcacgggcacctgcatctgcaaccctggctacaaggg 181683

Query: 1962 cgagagctgtgaggaag 1978
|||||
Sbjct: 181682 cgagagctgtgaggaag 181666

Score = 371 bits (187), Expect = 5e-99
Identities = 187/187 (100%)
Strand = Plus / Minus

Query: 2179 gagatctgtgctgccgactgtggtggccatggcgtgtgcgtagggggcacctgccgctgc 2238
|||||
Sbjct: 156628 gagatctgtgctgccgactgtggtggccatggcgtgtgcgtagggggcacctgccgctgc 156569

Query: 2239 gaggatggctggatgggggcagcctgcgaccagcgggcctgccacccgcgctgtgccgag 2298
|||||
Sbjct: 156568 gaggatggctggatgggggcagcctgcgaccagcgggcctgccacccgcgctgtgccgag 156509

Query: 2299 catgggacctgccgcgacggcaagtgcgagtgcagccctggctggaatggcgaacactgc 2358
|||||
Sbjct: 156508 catgggacctgccgcgacggcaagtgcgagtgcagccctggctggaatggcgaacactgc 156449

Query: 2359 accatcg 2365
|||||
Sbjct: 156448 accatcg 156442

Score = 343 bits (173), Expect = 1e-90
Identities = 173/173 (100%)
Strand = Plus / Minus

Query: 5040 gtacgacagctttggccgcctgacaaatgtgaccttcctactggccaggtgagcagttt 5099
|||||
Sbjct: 57770 gtacgacagctttggccgcctgacaaatgtgaccttcctactggccaggtgagcagttt 57711

Query: 5100 ccgaagtgatacagacagttcagtgcatgtccaggtagagacctccagcaaggatgatgt 5159
|||||
Sbjct: 57710 ccgaagtgatacagacagttcagtgcatgtccaggtagagacctccagcaaggatgatgt 57651

Query: 5160 caccataaccaccaacctgtctgcctcaggcgccttctacacactgctgcaag 5212
|||||
Sbjct: 57650 caccataaccaccaacctgtctgcctcaggcgccttctacacactgctgcaag 57598

Score = 313 bits (158), Expect = 1e-81
Identities = 158/158 (100%)
Strand = Plus / Minus

Query: 4006 ggcatcagtgagacaagtttgggctgatctacttcgtggatggcaccatgatcagacgc 4065
|||||
Sbjct: 78060 ggcatcagtgagacaagtttgggctgatctacttcgtggatggcaccatgatcagacgc 78001

Query: 4066 atcgatcagaatgggatcatctccaccctgctcggctctaatagatctcacatcagccccg 4125
|||||
Sbjct: 78000 atcgatcagaatgggatcatctccaccctgctcggctctaatagatctcacatcagccccg 77941

Query: 4126 ccactcagctgtgattctgtcatggatatttcccaggt 4163
|||||
Sbjct: 77940 ccactcagctgtgattctgtcatggatatttcccaggt 77903

Score = 293 bits (148), Expect = 9e-76
Identities = 148/148 (100%)
Strand = Plus / Minus

Query: 2365 gaggggtgccctgggttgatgcaatggcaacggcagatgtaccttagacctgaatgggttg 2424
|||||
Sbjct: 140683 gaggggtgccctgggttgatgcaatggcaacggcagatgtaccttagacctgaatgggttg 140624

Query: 2425 cactgcgtctgccagctgggctggagaggagctggctgtgacacttccatggagactgcc 2484
|||||
Sbjct: 140623 cactgcgtctgccagctgggctggagaggagctggctgtgacacttccatggagactgcc 140564

Query: 2485 tgcggtgacagcaaagacaatgatggag 2512
|||||
Sbjct: 140563 tgcggtgacagcaaagacaatgatggag 140536

Score = 289 bits (146), Expect = 1e-74
Identities = 146/146 (100%)
Strand = Plus / Minus

Query: 3379 gtttccgtgggttatgaatatgaatcctgccagatctaatacctgtgggaaaaaagaaca 3438
|||||
Sbjct: 95767 gtttccgtgggttatgaatatgaatcctgccagatctaatacctgtgggaaaaaagaaca 95708

Query: 3439 acagtgcctgcagggctatgaaattgacgcgtccaagcttgaggatggagcctagacaaa 3498
|||||
Sbjct: 95707 acagtgcctgcagggctatgaaattgacgcgtccaagcttgaggatggagcctagacaaa 95648

Query: 3499 catcatgccctcaacattcaaagtgg 3524
|||||
Sbjct: 95647 catcatgccctcaacattcaaagtgg 95622

Score = 281 bits (142), Expect = 3e-72
Identities = 145/146 (99%)
Strand = Plus / Minus

Query: 7358 cagatgttaacagctggctgctcacctttggattccagctacacaacgtgatccctgggt 7417
|||||
Sbjct: 31138 cagatgttaacagctggctgctcacctttggattccagctacacaacgtgatccctgggt 31079

Query: 7418 atcccaaaccagacatggatgccatggaaccctcctacgagcttatccacacacagatga 7477
|||||
Sbjct: 31078 atcccaaaccagacatggatgccatggaaccctcctacgagctcatccacacacagatga 31019

Query: 7478 aaacgcaggagtgggacaacagcaag 7503
|||||
Sbjct: 31018 aaacgcaggagtgggacaacagcaag 30993

Score = 240 bits (121), Expect = 1e-59
Identities = 121/121 (100%)
Strand = Plus / Minus

Query: 2729 ggcattgcttggttatttcgtggccaagtgatgacatcagatggaacccccctgggttggtg 2788
|||||
Sbjct: 108115 ggcattgcttggttatttcgtggccaagtgatgacatcagatggaacccccctgggttggtg 108056

Query: 2789 tgaacatcagttttgtcaataaccctctctttggatatacaatcagcaggcaagatggca 2848
|||||
Sbjct: 108055 tgaacatcagttttgtcaataaccctctctttggatatacaatcagcaggcaagatggca 107996

Query: 2849 g 2849
|
Sbjct: 107995 g 107995

Score = 204 bits (103), Expect = 6e-49
Identities = 103/103 (100%)
Strand = Plus / Minus

Query: 1681 gagtcggtggataactgccccagcaactgctatggcaatggtgactgcattctctgggacc 1740
|||||
Sbjct: 183940 gagtcggtggataactgccccagcaactgctatggcaatggtgactgcattctctgggacc 183881

Query: 1741 tgccactgcttcctgggtttcctgggccccgactgtggcagag 1783
|||||
Sbjct: 183880 tgccactgcttcctgggtttcctgggccccgactgtggcagag 183838

>AP002957.2.1.87834
Length = 87834

Score = 541 bits (273), Expect = e-150
Identities = 273/273 (100%)
Strand = Plus / Minus

Query: 221 caggtgccaacttcaccctgcgggagctggggctggaagaagtaacgccccctcacggga 280
|||||
Sbjct: 39273 caggtgccaacttcaccctgcgggagctggggctggaagaagtaacgccccctcacggga 39214

Query: 281 ccctgtaccggacagacattggcctccccactgcgggtactccatgggggctggctctg 340
|||||
Sbjct: 39213 ccctgtaccggacagacattggcctccccactgcgggtactccatgggggctggctctg 39154

Query: 341 atgccgacatggaggctgacacggtgctgtccctgagcaccctgcgtctgtggggcc 400
|||||
Sbjct: 39153 atgccgacatggaggctgacacggtgctgtccctgagcaccctgcgtctgtggggcc 39094

Query: 401 ggagcacacggtcagggcgcagctcctgcctgtccagccgggccaattccaatctcacac 460
|||||
Sbjct: 39093 ggagcacacggtcagggcgcagctcctgcctgtccagccgggccaattccaatctcacac 39034

Query: 461 tcaccgacaccgagcatgaaaacactgagactg 493
|||||
Sbjct: 39033 tcaccgacaccgagcatgaaaacactgagactg 39001

Score = 446 bits (225), Expect = e-121
Identities = 225/225 (100%)
Strand = Plus / Minus

Query: 1 atggacgtgaaggagaggaagccttaccgctcgctgacccggcgccgcgacgccgagcgc 60
|||||
Sbjct: 44207 atggacgtgaaggagaggaagccttaccgctcgctgacccggcgccgcgacgccgagcgc 44148

Query: 61 cgctacaccagctcgtccgcggacagcgaggagggcaaagccccgcagaaatcgtaacgc 120
|||||
Sbjct: 44147 cgctacaccagctcgtccgcggacagcgaggagggcaaagccccgcagaaatcgtaacgc 44088

Query: 121 tccagcgagaccctgaaggcctacgaccaggacgcccgcctagcctatggcagccgcgtc 180
|||||
Sbjct: 44087 tccagcgagaccctgaaggcctacgaccaggacgcccgcctagcctatggcagccgcgtc 44028

Query: 181 aaggacattgtgccgcaggaggccgaggaattctgccgcacaggt 225
|||||
Sbjct: 44027 aaggacattgtgccgcaggaggccgaggaattctgccgcacaggt 43983

>AP002515.3.1.166063

Length = 166063

Score = 509 bits (257), Expect = e-141

Identities = 257/257 (100%)

Strand = Plus / Minus

Query: 493 gatcatccgggcggcctgcagaaccacgcgcggctccggacgccgccgccgctctcg 552
|||||
Sbjct: 111721 gatcatccgggcggcctgcagaaccacgcgcggctccggacgccgccgccgctctcg 111662

Query: 553 caccgcccacaccccccaaccagcaccacgcggcctccattaactccctgaaccggggcaac 612
|||||
Sbjct: 111661 caccgcccacaccccccaaccagcaccacgcggcctccattaactccctgaaccggggcaac 111602

Query: 613 ttcacgccgaggagcaacccccagcccgccccccacggaccactcgctctccggagagccc 672
|||||
Sbjct: 111601 ttcacgccgaggagcaacccccagcccgccccccacggaccactcgctctccggagagccc 111542

Query: 673 cctgccggcgggcgcccaggagcctgcccacgcccaggagaactggctgctcaacagcaac 732
|||||
Sbjct: 111541 cctgccggcgggcgcccaggagcctgcccacgcccaggagaactggctgctcaacagcaac 111482

Query: 733 atccccctggagaccag 749
|||||
Sbjct: 111481 atccccctggagaccag 111465

Score = 470 bits (237), Expect = e-129

Identities = 237/237 (100%)

Strand = Plus / Minus

Query: 848 ggcacttcctcttcaagcctggaggcacctccccgctcttctgcaccacatcaccaggg 907
|||||
Sbjct: 98218 ggcacttcctcttcaagcctggaggcacctccccgctcttctgcaccacatcaccaggg 98159

Query: 908 acccactgacgtccagcacagtgtactctcctccgccccgacctgccccgcagcacct 967
|||||
Sbjct: 98158 acccactgacgtccagcacagtgtactctcctccgccccgacctgccccgcagcacct 98099

Query: 968 tcgcccggccggcctttaacctcaagaagccctccaagtactgtaactggaagtgcgcag 1027
|||||
Sbjct: 98098 tcgcccggccggcctttaacctcaagaagccctccaagtactgtaactggaagtgcgcag 98039

Query: 1028 ccctgagcgccatcggtcatctcagccactctgggtcatcctgctggcatactttgtgg 1084
|||||
Sbjct: 98038 ccctgagcgccatcggtcatctcagccactctgggtcatcctgctggcatactttgtgg 97982

Score = 430 bits (217), Expect = e-117
Identities = 217/217 (100%)
Strand = Plus / Minus

Query: 1254 aggaaagcccagtagtttctttccagaggacagtttcatagattctggagaaattgatgt 1313
|||||
Sbjct: 64377 aggaaagcccagtagtttctttccagaggacagtttcatagattctggagaaattgatgt 64318

Query: 1314 gggaaaggcgagcttcccagaagattcctcctggcactttctggagatctcaagtgttcat 1373
|||||
Sbjct: 64317 gggaaaggcgagcttcccagaagattcctcctggcactttctggagatctcaagtgttcat 64258

Query: 1374 agaccatcctgtgcatctgaaattcaatgtgtctctgggaaaggcagccctggttggcat 1433
|||||
Sbjct: 64257 agaccatcctgtgcatctgaaattcaatgtgtctctgggaaaggcagccctggttggcat 64198

Query: 1434 ttatggcagaaaaggcctccctccttcacatacacag 1470
|||||
Sbjct: 64197 ttatggcagaaaaggcctccctccttcacatacacag 64161

Score = 424 bits (214), Expect = e-115
Identities = 214/214 (100%)
Strand = Plus / Minus

Query: 1468 cagtttgactttgtggagctgctggatggcaggaggctcctaaccaggaggcgcgaggc 1527
|||||
Sbjct: 62514 cagtttgactttgtggagctgctggatggcaggaggctcctaaccaggaggcgcgaggc 62455

Query: 1528 ctagaggggaccccgccagtcctcggggaactgtgccccctccagccatgagacaggc 1587
|||||
Sbjct: 62454 ctagaggggaccccgccagtcctcggggaactgtgccccctccagccatgagacaggc 62395

Query: 1588 ttcatccagtatatttgattcaggaatctggcacttggctttttacaatgacggaaaggag 1647
|||||
Sbjct: 62394 ttcatccagtatatttgattcaggaatctggcacttggctttttacaatgacggaaaggag 62335

Query: 1648 tcagaagtggtttcctttctcaccactgccattg 1681
|||||
Sbjct: 62334 tcagaagtggtttcctttctcaccactgccattg 62301

Score = 402 bits (203), Expect = e-108
Identities = 203/203 (100%)
Strand = Plus / Minus

Query: 1977 agtggactgcatggacccccacatgttcaggccggggtgtctgcgtgagaggcgaatgcca 2036
|||||
Sbjct: 13691 agtggactgcatggacccccacatgttcaggccggggtgtctgcgtgagaggcgaatgcca 13632

Query: 2037 ctgctctgtgggatggggaggcaccaactgcgagacccccaggggccacatgcttagacca 2096
|||||
Sbjct: 13631 ctgctctgtgggatggggaggcaccaactgcgagacccccaggggccacatgcttagacca 13572

Query: 2097 gtgttcaggccacggaaccttcctcccggacaccgggctttgcagctgtgacccaagctg 2156
|||||
Sbjct: 13571 gtgttcaggccacggaaccttcctcccggacaccgggctttgcagctgtgacccaagctg 13512

Query: 2157 gactggacacgactgttctatcg 2179
|||||
Sbjct: 13511 gactggacacgactgttctatcg 13489

Score = 391 bits (197), Expect = e-105
Identities = 197/197 (100%)
Strand = Plus / Minus

Query: 1782 agcctcctgccccgtgctctgtagcggaaatggccaatacatgaaaggcagatgcttgtg 1841
|||||
Sbjct: 20515 agcctcctgccccgtgctctgtagcggaaatggccaatacatgaaaggcagatgcttgtg 20456

Query: 1842 ccacagtggctggaaaaggcgctgagtgcgatgtgccaccaaccagtgtatcgatgtggc 1901
|||||
Sbjct: 20455 ccacagtggctggaaaaggcgctgagtgcgatgtgccaccaaccagtgtatcgatgtggc 20396

Query: 1902 ctgcagcaaccatggcacctgcatcacgggcacctgcatctgcaaccctggctacaagg 1961
|||||
Sbjct: 20395 ctgcagcaaccatggcacctgcatcacgggcacctgcatctgcaaccctggctacaagg 20336

Query: 1962 cgagagctgtgaggaag 1978
|||||
Sbjct: 20335 cgagagctgtgaggaag 20319

Score = 343 bits (173), Expect = 1e-90
Identities = 173/173 (100%)
Strand = Plus / Minus

Query: 1084 gccatgcacctgtttggcctaaactggcacctgcagccgatggaggggcagatgtatgag 1143
|||||
Sbjct: 71330 gccatgcacctgtttggcctaaactggcacctgcagccgatggaggggcagatgtatgag 71271

Query: 1144 atcacggaggacacagccagcagttggcctgtgccaaaccgacgtctccctataaccctca 1203
|||||
Sbjct: 71270 atcacggaggacacagccagcagttggcctgtgccaaaccgacgtctccctataaccctca 71211

Query: 1204 gggggcactggccttagagacccctgacaggaaaggcaaaggaaccacagaagg 1256
|||||
Sbjct: 71210 gggggcactggccttagagacccctgacaggaaaggcaaaggaaccacagaagg 71158

Score = 204 bits (103), Expect = 6e-49
Identities = 103/103 (100%)
Strand = Plus / Minus


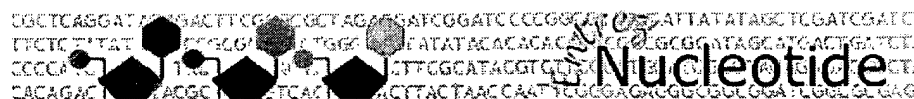
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Query: 1741 tgccactgcttcctgggtttcctgggccccgactgtggcagag 1783
|||||
Sbjct: 22533 tgccactgcttcctgggtttcctgggccccgactgtggcagag 22491

Score = 202 bits (102), Expect = 3e-48
Identities = 102/102 (100%)
Strand = Plus / Minus

Query: 748 agaaacctaggcaagcagccattcctagggacattgcaggacaacctcattgagatggac 807
|||||
Sbjct: 99535 agaaacctaggcaagcagccattcctagggacattgcaggacaacctcattgagatggac 99476

Query: 808 attctcggcgccctcccgccatgatggggcttacagtgacggg 849
|||||
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Search for

☐ 1: AP002768. Homo sapiens geno...[gi:13429926]

[Links](#)

LOCUS AP002768 186084 bp DNA linear PRI 15-MAR-2003
 DEFINITION Homo sapiens genomic DNA, chromosome 11q, clone:RP11-673F18, complete sequence.

ACCESSION AP002768

VERSION AP002768.3 GI:13429926

KEYWORDS HTG.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1

AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.

TITLE Homo sapiens genomic DNA

JOURNAL Published Only in Database (2000)

REFERENCE 2 (bases 1 to 186084)

AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.

TITLE Direct Submission

JOURNAL Submitted (10-JUL-2000) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou,Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)

COMMENT On Mar 21, 2001 this sequence version replaced gi:11071944.

FEATURES Location/Qualifiers

source

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BASE COUNT 49231 a 41979 c 41760 g 53114 t

ORIGIN

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301 ctgtgggtcat tgcagcggtta cagcattaga ggggtgctgta agcccaggta caatgtgact
361 cttgcagact cttgatgacc cagccctgat ggacttgggt agtacaaggg agaatttcct
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